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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,909	11/20/2003	Roger A. Hala	23121-pa	2384

7590 11/04/2004  
Dennis A. DeBoo  
DeBoo & Co.  
Suite 900  
400 Capitol Mall  
Sacramento, CA 95814

EXAMINER

VO, HIEN XUAN

ART UNIT PAPER NUMBER

2863

DATE MAILED: 11/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/718,909	HALA ET AL.	
	Examiner	Art Unit	
	Hien X. Vo	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2003.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☐ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 17-20 is/are allowed.
- 6) ☐ Claim(s) 1,3,4 and 7-13 is/are rejected.
- 7) ☐ Claim(s) 2,5,6 and 14-16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Specification***

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The abstract of the disclosure is objected to because the legal phraseology "said" (line 9) has been used. Correction is required. See MPEP § 608.01(b).

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Regarding claims 1 (line 11), 11 (line 12), 17 (line 7 and 11), the word "it" renders the claim indefinite because it is unclear, vague and indefinite what "it" refers to since no reference to relate thereto is recited.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 3-4, 7-13 rejected under 35 U.S.C. 102(b) as being anticipated by Hala (U.S. Patent No. 6,026,348).

With respect to claim 1, Hala discloses an apparatus and method for compressing measurement data correlative to machine status that includes monitoring a machine with at least one transducer outputting an electrical signal correlative to machine status (see e.g. col. 4, lines 1-5), sampling the electrical signal into a digitized signal (see e.g. col. 4, lines 7-9), transforming the digitized signal into a plurality of digital packets by determining for each of the plurality of digital packets a maximum and a minimum value of said digitized signal taken over a sampling range correlated to a predefined degree of rotation of a rotating element of the machine and each of said plurality of digital packets having a location defined by the correlated predefined degree of rotation of the rotating element over which it was sampled (see e.g. col. 4, lines 16-46), comparing said values of said plurality of digital packets to known values and determining impulse events based on the comparison step (see e.g. col. 7, lines 1-21).

With respect to claim 3, Hala discloses the invention as claimed including a step of filtering said digitized signal prior to the transforming step for defining a filtered digitized signal (see e.g. col.3, lines 15-16).

With respect to claim 4, Hala discloses the invention as claimed including a step of storing the plurality of digital packets transformed from said filtered digitized signal into a digital waveform (see e.g. col. 7, lines 50-64), displaying said digital waveform on a computer (see e.g. col. 12, lines 25-29), and comparing said displayed digital waveform to at least one known and displayed waveform for determining impulse events based on the comparison step (see e.g. Figs. 5-12).

With respect to claims 7-10, Hala discloses the invention as claimed including the step of monitoring vibration of a rotating machine with at least one acceleration transducer outputting an electrical signal correlative to rotating machine status (see e.g. col. 13, lines 32-35), transforming said digitized signal into said plurality of digital packets each having said location that is a position in rotation of a rotating element of the rotating machine for use in determining an event timing to be able to accomplish event correlation to other machine events and each having maximum and minimum values for maintaining relative magnitudes of the events so they can be compared historically to previous records (see e.g. col. 7, lines 1-21).

With respect to claim 11, Hala discloses the invention as claimed including an analog to digital converter operatively coupled to the transducer for sampling and digitizing said electrical signal into a digitized electrical signal (see e.g. col.10, lines 52-53), a processor operatively coupled to said sampling device for receiving said digitized

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electrical signal (see e.g. Fig.1, item 42), means for transforming the digitized electrical signal into a plurality of digital packets each having a maximum and a minimum value taken over a sampling range correlated to a predefined degree of rotation of a rotating element of the machine and each of said plurality of digital packets having a location defined by the correlated predefined degree of rotation of the rotating element over which it was sampled (see e.g. Figs. 2-4, and col. 7, lines 1-21), said processor further including means for comparing the plurality of maximum and minimum values of said plurality of digital packets and their respective locations to known values, and means for determining impulse events based on the comparison step (see e.g. Figs. 2 and 4).

Claims 12-13 are apparatus claims corresponding to method claims 3-4.

Therefore, claims 12-13 are rejected for the same rationales set forth for claims 3-4.

7. Claims 2, 5-6, 14-16 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Claims 17-20 allowed.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hien X. Vo whose telephone number is (571) 272-2282. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hien Vo  
10/19/2004



John Barlow  
Supervisory Patent Examiner  
Technology Center 2800